REMARKS

In this paper, claim 27 is currently amended. After entry of the above amendment, Claims 1, 3-24 and 26-28 are pending, with claim 22 temporarily withdrawn from consideration, and claims 2 and 25 have been canceled.

Claims 1, 3-21, 23, 24 and 26-28 were rejected under 35 U.S.C. §112 as not complying with the written description requirement. It is submitted that one of ordinary skilled in the art would readily recognize from the originally-filed application that the inventor had possession of the claimed invention.

As for claim 1, support for the recitation that "the biasing force is always applied to the first engaging member as the second engaging member moves through the entire range of operating movement of the second engaging member in the first and second directions" may be found in Fig. 5 which shows how pawl bias spring (208) mounted in fixed support sleeve (204) of fixed base plate (22) provides a constant biasing force to bias interface member (212). Bias interface member (212) contacts the surface of positioning pawl (41) at a bias location (X). Because of the cooperation between axle (118) of pawl (41) and slot (114) in base plate (22), the movement of pawl (41) is limited such that the biasing force provided by pawl bias spring (208) and bias interface member (212) is always applied to pawl (41), e.g.., between bias locations (X) and (Y), inclusive, as ratchet (34) moves through the entire range of operating movement of ratchet (34) in the first and second directions. The specification has been amended to provide explicit support for this feature.

As for claim 27, that claim has been amended to clarify that biasing force that biases the first engaging member towards the second engaging member is the only biasing force applied to the first engaging member. Support for this amendment may be found in Fig. 5 which shows how pawl bias spring (208) provides a biasing force to bias interface member (212), and bias interface member (212) communicates this biasing force to the surface of positioning pawl (41), thereby biasing pawl (41) towards ratchet (34). Such biasing force is the only biasing force applied to pawl (41). The specification has been amended to provide explicit support for this feature.

As for claim 28, support for the recitation that "at least one of the first biasing location or the second biasing location is positioned between the axle and the location where the first engaging member engages the second engaging member" may be found in Fig. 5 which shows at least one of the first biasing location (X) or the second biasing location (Y) positioned between axle (118) and the location where pawl tooth (146) of pawl (41) engages ratchet (34). The specification has been amended to provide explicit support for this feature.

Claim 28 was rejected under 35 U.S.C. §112 as being indefinite. This basis for rejection is respectfully traversed.

It is believed that the text of claim 28 is clear because the "location of the application of the biasing force" refers to the first and second biasing locations, and the "location where the first engaging member engages the second engaging member" is clear on its face. When applied to the embodiment shown in Fig. 5, the "location of the application of the biasing force" refers to the first and second biasing locations (X) and (Y) on pawl (41), whereas the "location where the first engaging member engages the second engaging member" refers to the location where pawl tooth (146) of pawl (41) engages ratchet (34). Thus, there is no double inclusion of elements.

Claims 1, 3-21, 23, 24, 26 and 27 were rejected under 35 U.S.C. §103(a) as being unpatentable by Troiano (US 6,105,459) in view of Scanland, et al (US 4,667,459). This basis for rejection is respectfully traversed.

Troiano discloses a parking brake actuator for a vehicle. The parking brake actuator comprises a fixed structure (24), a cable actuator (20) pivotably mounted to fixed structure (24) through a shaft (26), a pawl shaft (31) attached to fixed structure (24), a pawl member (32) that includes a slot (36) for slidably receiving pawl shaft (31) therein so that pawl member (32) can rotate and translate relative to pawl shaft (31), a release lever (46) pivotably mounted to fixed structure (24) through a release shaft (47), a release actuator (19) slidably mounted to fixed structure (24) for controlling the pivoting of release lever (46), and a spring (45) that biases release actuator (19) to a home position. Another spring (40) applies a clockwise biasing force to pawl member (32) in Fig. 2.

Pawl member (32) includes a pawl tooth (34) that engages selected ones of a plurality of pawl teeth (30) disposed on cable actuator (20).

The office action refers to the positions of the parking brake actuator shown in Figs. 3 and 4. Figs. 3 and 4 show how the parking brake actuator is operated to set the parking brake. When the user rotates cable actuator (20) counterclockwise as shown in Fig. 3, a cam portion (48) of release lever (46) engages a follower portion (50) of pawl member (32) slightly above the lower tip of follower portion (50), thereby applying a counter-clockwise biasing force to pawl member (32) at a first biasing location. When cable actuator (20) is in the position shown in Fig. 4 (the brake set position), cam portion (48) of release lever (46) engages follower portion (50) of pawl member (32) at the lower tip of follower portion (50), thereby applying a counter-clockwise biasing force to pawl member (32) at a second biasing location.

Fig. 5 shows how the parking brake is released. During this time, the user pulls release actuator (19), thereby removing the biasing force of spring (45) from pawl member (32). As a result, the clockwise biasing force of spring (40) causes pawl member (32) to rotate clockwise, thereby disengaging pawl tooth (34) of pawl member (32) from pawl teeth (30) of cable actuator (20) and allowing cable actuator (20) to rotate clockwise to the brake-released position. Since the biasing force of spring (45) is removed from pawl member (32) during this time, the biasing force is not always applied to the first engaging member as the second engaging member moves through the entire range of operating movement of the second engaging member in the first and second directions as recited in claim 1.

Scanland, et al discloses a safety control for power lawn mowers. In the embodiment shown in Figs. 9-10, a spring (116) presses against a projecting lug (118) of a link (106) so that a detent (104) on link (106) engages either a notch (102) or the outer peripheral surface of a disk (101) of a control lever (99) whenever a deadman lever (108) is not pulled into the operating position by the user. Projecting lug (118) fixes the position of spring (116) relative to link (106).

In the embodiment shown in Figs. 12-14, a spring (142) presses against a projecting lug (145) of a rocker arm (135) so that a detent (136) on rocker arm (135) engages a notch (139) of a

control lever (125) whenever a deadman lever (132) is not pulled into the operating position by the user. Projecting lug (145) fixes the position of spring (142) relative to rocker arm (135).

The office action states that it would have been obvious to always apply the biasing force to Troiano's first pawl member (32) (first engaging member) to improve the control of Troiano's apparatus as allegedly taught or suggested by Scanland, et al. The Examiner refers to col. 1:31 through col. 2:18 of Scanland, et al to justify this position.

The cited text refers to alleged benefits of Scanland, et al's device. Such benefits include a device wherein the control lever is locked in the disengaged position when the deadman lever is in the disengaged position and which can be locked in the operating position when the deadman lever is in the engaged position (col. 1:33-39); a device wherein the control lever may be positively locked in the disengaged position and also positively locked in the engaged position (col. 1:40-44); a device wherein the control lever may be tripped out of operating position and returned to the disengaged position whenever the deadman lever is returned to the disengaged position (col. 1:45-49); and a device that is both reliable in operation and economical to manufacture (col. 1:56-59). In all cases, Scanland, et al seeks a control device that requires two distinct actions for actuation (col. 2:12-17). The first action is movement of the deadman lever from a disengaged to an engaged position. The second action is movement of the control lever from the disengaged position to the operating position when the deadman lever is in engaged position.

A deadman lever is not used with parking brakes, there is no need for a deadman lever with parking brakes, and no benefit would accrue from employing the safety concepts of a deadman lever to a parking brake. A deadman lever ensures that the operator is in control of the machine in question so that the operator will not be injured in the event that the operator loses control of the machine. More specifically, the operator must affirmatively move the deadman lever to the operating position to enable the machine to operate. If the operator somehow loses his or her grip on the deadman lever, then the safety device connected to the deadman lever automatically triggers to disable the machine.

A parking brake has no use for a deadman lever, for a parking brake poses no risk to the operator. Furthermore, a parking brake which requires the actuation of a lever in addition to pressing on the parking brake pedal makes the brake more complicated and bothersome to operate, thereby reducing the chance that the driver will bother to operate the parking brake and increasing the danger to the general public. Additionally, it makes no sense to require the driver to hold on to a separate lever while driving to keep the parking brake from being engaged, or to hold on to a separate lever to keep the parking brake engaged while the car is parked. Finally, there is no reason or evidence that the teachings of Scanland, et al would make Troiano's parking brake more reliable in operation or economical to manufacture.

Even more importantly, the biasing force applied to Troiano's pawl member (32) *must* be removed in order for the parking brake to be released. If the biasing force is maintained on pawl member (32), then pawl tooth (34) will continue to engage sector teeth (30), thereby preventing cable actuator (20) from rotating clockwise to the disengaged position and destroying the usability of the parking brake. It is well-settled that it is not obvious to modify a prior art device in a manner that destroys the operation of that device. *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

Thus, neither Troiano nor Scanland, et al discloses or suggests the subject matter recited in claim 1.

Claims 1 and 27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Troiano in view of Dal Pra' (US 6,792,826). This basis for rejection is respectfully traversed.

The teachings of Troiano have been discussed in detail above.

Dal Pra' discloses a combined gear change and brake control unit for a bicycle. The gear change control unit includes a gear change lever (30) and a button lever (32), wherein gear change lever (30) is used to control the rotation of a cable pulley (24) in a first direction (26), and button lever (32) is used to control the rotation of cable pulley (24) in a second direction (28). Cable pulley (24) is biased towards the second direction (28) by the derailleur return spring. Cable pulley (24) normally is prevented from rotating in second direction (28) by a pawl (46) attached to a rocker arm (42) such that pawl (46) engages a first set of teeth (38) coupled to pulley (24).

Button lever (32) is pivotably coupled to a support body (12) of the gear change unit by a pivot shaft (34). Button lever includes an appendix (52) that contacts a corresponding appendix (50) on rocker arm (42) so that counterclockwise rotation of button lever (32) (Fig. 3b) causes rocker arm (42) to rotate clockwise, thereby disengaging pawl (46) from the first set of teeth (38). Button lever (32) is biased towards the non-operating position (Fig. 2b) by a spring (56).

The office action states that it would have been obvious to always apply the biasing force to Troiano's first pawl member (32) (first engaging member) in order to construct a more simple and cost effective apparatus. The Examiner refers to col. 1:30-35 and claims 1-20 of Dal Pra' to justify this position.

Dal Pra' does not state that the provision of spring (56) results in a more simple and cost effective apparatus, and especially not a more simple and cost effective parking brake. Indeed, Dal Pra' seeks to improve upon a combined bicycle gear change and brake control unit of the type described in EP 504,118 (EP '118). The device disclosed in EP '118 also includes a button lever (37) (Fig. 2) biased towards the non-operating position by a spring (41), so Dal Pra's button lever (32) and spring (56) are not the components that result in a more simple and cost effective apparatus, even for a bicycle gear change device. Furthermore, the biasing force provided by Dal Pra's spring (56) is used to bias button lever (32) towards the non-operating position, whereas Troiano's biasing force is used to bias pawl (32) towards the operating position. Thus, the principles of operation of the two components are entirely different and opposite to each other.

Even more importantly, as noted above, the biasing force applied to Troiano's pawl member (32) *must* be removed in order for the parking brake to be released. If the biasing force is maintained on pawl member (32), then pawl tooth (34) will continue to engage sector teeth (30), thereby preventing cable actuator (20) from rotating clockwise to the disengaged position and destroying the usability of the parking brake. It is not obvious to modify a prior art device in a manner that destroys the operation of that device.

Claims 1 and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Troiano in view of Campagnolo (US 6,792,826). This basis for rejection is respectfully traversed.

Campagnolo discloses a bicycle gear change control device that includes a first control lever (10) and a second control lever (11), wherein first control lever (10) is used to control the rotation of a cable pulley (7) in a cable unwinding direction, and second control lever (11) is used to control the rotation of cable pulley (7) in a cable winding direction. Cable pulley (7) normally is prevented from rotating by a pair of pin springs (13) (Fig. 3) that engage a toothed wheel (12) fixed to rotor (7). A pawl (20) is pivotably mounted to first control lever (10) by a pin (19). Pawl (20) (Fig. 2) is biased by a spring (23) towards engagement with another toothed wheel (22) coupled to rotor (7). However, pawl (20) is held out of engagement with toothed wheel (22) by a stop element (14a) until first control lever (10) is operated by the rider.

As for claim 1, the office action states that it would have been obvious to always apply the biasing force to Troiano's first pawl member (32) (first engaging member) in order to provide an easier and more convenient actuation to the cyclist/user. The Examiner refers to col. 1:38 through col. 2:6 of Campagnolo to justify this position.

Campagnolo does not state that the provision of a constant biasing force by spring (23) on pawl (20) provides an easier and more convenient actuation to the cyclist/user. Campagnolo seeks to improve on a bicycle gear change control device wherein a first control lever is located above the handlebar and a second control lever is located below the handlebar, thus requiring the cyclist to modify the position of his/her hand on the handlebar in order to operate the gear change device. Col. 1:28-36. The disclosed device is constructed so that both control levers are located below the handlebar. Col. 1:40-46. The biasing force of spring (23) against pawl (20) has nothing to do with this alleged benefit.

Another alleged benefit of the disclosed device is that, since both levers are located below the handlebar, the handlebar does not interfere with the operation of the levers. Thus, a longer travel of the levers is allowed with the resulting possibility of moving the bicycle chain over a plurality of sprockets with one operation. Col. 1:40-46. However, the biasing force of spring (23) has nothing to do with this alleged benefit.

Another alleged benefit of the disclosed device is partial balance of the biasing force of the return spring of the derailleur by the pair of pin springs (13) that engage toothed wheel (12) fixed to rotor (7), thereby making actuation of the rotor by the cyclist easier and more convenient. This appears to be the benefit alluded to by the examiner, but the benefit results from the engagement of pin springs (13) with toothed wheel (12), not by the engagement of pawl spring (23) with pawl (20).

The last alleged benefit of the disclosed device is the provision of an arched slot to display the gear number. Spring (23) plays no role in this gear display.

Thus, the biasing force of spring (23) plays no role in any of the benefits noted by Campagnolo.

Even more importantly, as noted above, the biasing force applied to Troiano's pawl member (32) *must* be removed in order for the parking brake to be released. If the biasing force is maintained on pawl member (32), then pawl tooth (34) will continue to engage sector teeth (30), thereby preventing cable actuator (20) from rotating clockwise to the disengaged position and destroying the usability of the parking brake. It is not obvious to modify a prior art device in a manner that destroys the operation of that device.

Thus, neither Troiano nor Campagnolo discloses or suggests the subject matter recited in claim 1.

As for claim 28, the same arguments set forth above apply equally as well here. The position of the biasing location of Campagnolo's pawl spring (23) on pawl (20) plays no role in any of the alleged benefits noted by Campagnolo. Furthermore, the biasing location of spring (23) on pawl (20) never changes, so if the teachings of Campagnolo were applied to Troiano, then the biasing location on Troiano's pawl (32) would never change. Thus, neither Troiano nor Campagnolo discloses or suggests the subject matter recited in claim 28.

Accordingly, it is believed that the rejections under 35 U.S.C. §103 have been overcome by the foregoing amendment and remarks, and it is submitted that the claims are in condition for

allowance. Reconsideration of this application as amended is respectfully requested. Allowance of all claims is earnestly solicited.

Respectfully submitted,

James A. Deland
Reg. No. 31,242

DELAND LAW OFFICE
P.O. Box 69
Klamath River, California 96050
(530) 465-2430